

Bruhat Bangalore Mahanagara Palike
Executive Engineer Yelahanka Division

Improvements to roads, drains and other developmental works in Vaderahalli grama panchayathi limits under SWM head in Chief Minister Nava Nagarothan grants of Yelahanka division
(Package-09)

- 1 Improvements to roads and drains at Vaderahalli layout
- 2 Improvements to roads and drains at Vaderahalli Rainbow layout
- 3 Improvements to roads and drains at Muneshwara layout
- 4 Improvements to roads and drains at Medi agrahara village
- 5 Improvements to roads and drains at Medi agrahara Nirashrithara layout
- 6 Improvements to roads and drains at Syampura village
- 7 Improvements to roads and drains at Subedarapalya village
- 8 Improvements to roads and drains at Veerasagara village

Quantity Abstract (Estimate Wise)

Sl No	Description of Item	Unit	Improvements to roads and drains at Vaderahalli layout	Improvements to roads and drains at Vaderahalli Rainbow layout	Improvements to roads and drains at Muneshwara layout	Improvements to roads and drains at Medi agrahara village	Improvements to roads and drains at Medi agrahara Nirashrithara layout	Improvements to roads and drains at Syampura village	Improvements to roads and drains at Subedarapalya village	Improvements to roads and drains at Veerasagara village	Total Quantity as per Estimation	Rate, Rs	Amount, Rs
			1	2	3	4	5	6	7	8			
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications (I No-19.1.P No-141), 10km lead = (1.28x2x10)+57.	Cum	1071.13	603.55	1317.11	818.65	508.39	453.15	877.83	920.75	6570.55	216.50	1422524.94
2	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. Data Rate												
	a) 40mm Jelly	Cum	0.87	0.74	0.87	0.62	0.50	0.62	0.50	0.62	5.33	1901.00	10136.13
	b) 20mm Jelly	Cum	0.87	0.74	0.87	0.62	0.50	0.62	0.50	0.62	5.33	1901.00	10136.13
	c) Coarse sand.	Cum	0.65	0.56	0.65	0.47	0.37	0.47	0.37	0.47	4.00	2651.00	10601.35
	d) Fine Sand	Cum	0.43	0.37	0.43	0.31	0.25	0.31	0.25	0.31	2.67	2651.00	7067.57
	e) 12.5mm chips	Cum	0.65	0.56	0.65	0.47	0.37	0.47	0.37	0.47	4.00	1901.00	7602.10
3	Supplying, laying and jointing HDPE pipes of specified grade and conforming to IS 4984- 995 with latest amendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe around to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bends, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. for : HDPE Grade PE80-PN6.0, 630 mm dia. (Perforated Pipe for Rain Water Harvesting Pit) (BWSB SR 2017-18, Pg No 121 Item No. 1.17 Code No. K010Q)	m	12.60	10.80	12.60	9.00	7.20	9.00	7.20	9.00	77.40	10822.32	837647.57

4	Description of Item	Unit	and drains	and drains	and drains	and drains	and drains	nts to roads	nts to roads	improvements	Total Quantity as per Estimation	Rate, Rs	Amount, R
			at Vaderahalli layout	at Vaderahalli Rainbow layout	at Muneshwar a layout	at Medi agrahara village	at Medi agrahara Nirashrithar a layout	and drains at Syampura village	and drains at Subedarapa lya village	to roads and drains at Veerasagara village			
			1	2	3	4	5	6	7	8			
	Providing of Geonets for Rain Water Harvesting pit on top of the filter media as specified in drawings or as approved by Engineer Incharge. Data Rate	Sqm	2.17	1.86	2.17	1.55	1.24	1.55	1.24	1.55	13.33	71.03	946.83
	KSRB 4-1.2 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM curing complete as per specifications. (P.No-13,I No-4.2,KPWD SR 2018-19)	Cum	176.16	84.45	182.94	130.11	84.36	75.06	131.34	142.26	1006.68	5349.82	5385556.80
	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specificationsdo- Wall & bottom thickness 15cm (I No-37.59.2,P No-271,KPWD SR 2018-19)	Cum	361.30	193.58	404.94	274.83	173.20	144.10	250.74	282.79	2085.48	6870.10	14327435.54
	KSRB M2200-6. Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200(I No-28.8.2,P No-229)	Ton	22.44	12.12	27.58	17.05	11.26	8.75	15.04	17.29	131.53	70279.99	9244196.26
	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting , including form work, cost of all materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,complete. (Data Rate)	Sqm	906.30	468.75	766.60	660.75	390.00	401.40	716.40	777.00	5113.20	2337.00	11949548.40
	Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of all materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer ncharge. (Data Rate)	Sqm	58.80	39.00	216.10	43.20	67.20	8.40		25.20	459.90	5418.00	2491738.20
	SRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tipper, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH specification MORTH Specification No.301Loading and unloading with 10km lead= No-19.14,P No-143) 10km lead = (1.28x2x8)	Cum	992.45	937.92	3386.25	474.15	827.50	1046.13		490.50	8754.90	67.83	593844.53

Sl No	Description of Item	Unit	and drains at Vaderahalli layout	and drains at Vaderahalli Rainbow layout	and drains at Muneshwar a layout	and drains at Medi agraphara village	and drains at Medi agraphara Nirashrithar a layout	and drains at Syampura village	and drains at Subedarapa lya village	to roads and drains at Veerasagara village	Quantity as per Estimation	Rate, Rs	Amount, R
			1	2	3	4	5	6	7	8			
11	KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occurring during rolling including cost of all labour, HOM complete as per specifications. MORTH / Chapter 3 (I No-19.64,P No-147)	Sqm	3534.00	3126.40	6175.00	1896.60	3310.00	6594.50		1635.00	28261.50	6.18	174656.07
12	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.85cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601ef MORTH V Revision and IS 456 Table-5. with OPC at 150 kg/cum and coarse aggregate .86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor. (I No-22.1,P No-174)	Cum	530.10	468.96		284.49	496.50			245.25	2025.30	3692.55	7478521.52
13	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rakers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermeable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to(P.No-176,I No-22.6.1)	Cum	530.10	468.96		284.49	496.50			245.25	2025.30	5063.48	10255066.04
14	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)	Cum			1220.25			987.68			2213.93	1938.46	4291605.06

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			1	2	3	4	5	6	7	8			
15	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)	Cum			1839.38			1481.51			3320.89	1944.64	6457930.67
16	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)	Sqm			8175.00			6584.50			14759.50	32.96	486473.12
7	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revision using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6)	Cum			337.50			329.23			666.73	7218.24	4812581.06
1	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)	Sqm			6750.00			6584.50			13334.50	12.36	164814.42
	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminous binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12)	Cum			312.00			197.54			509.54	8453.21	4307206.36

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			1	2	3	4	5	6	7	8			
	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)	Sqm	152.40	162.40	398.25	83.60	134.00	250.00		68.40	1249.05	441.87	551917.72

Technical Sanction

Accorded For Rs. 10.15 Crore

Head of A/O. ~~XXXXXX~~ S.

CER NO : 222 Dt: 08.11.2019

Construction Cost 85279754.37

12% GST 10233570.52

5% Tender Premium 4263987.72

DPR and PMC Cost Including GST 1718000.00

Sub Total 101495312.62

Miscellaneous 4687.38

Grand Total 101500000.00

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The rates adopted based on the PWD SR, Bangalore circle for year 2018-2019, issue rates dated 21-10-2019 and Data Rates

[Signature]
TA / CE (YNK)

[Signature]
Assistant Engineer
Yelahanka Division
BBMP Bangalore

[Signature]
Asst. Executive Engineer
Yelahanka Division
BBMP Bangalore

[Signature]
Executive Engineer
Yelahanka Division
BBMP Bangalore

Administrative Sanction for Rs. 10.15 Crore
Ten crore Lakhs
only
is accorded under head Nava nagar
Annexure - S
Registered as CE No. Subject
to conditions contained in enclosed memo
No. E/YNK/AS/104/2019-20 D-1/3/2020
[Signature]
Executive Engineer

TECHNICAL SANCTION